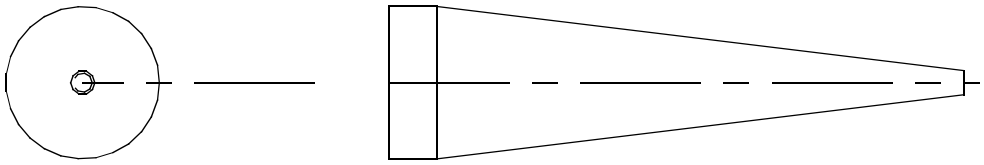
Thorndike CONE Loads

CL-XXXX



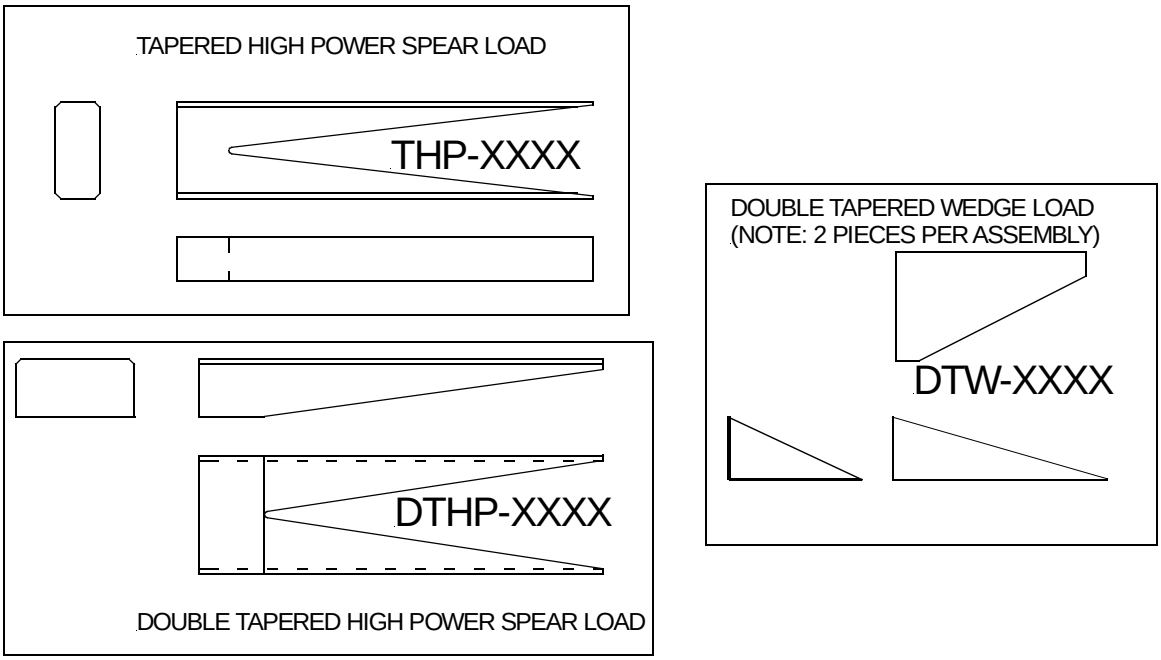
Thorndike Cone loads are precision machined, linear tapered, lossy inserts to give the best VSWR over the widest frequency range. They can be used for precision bench measurements and calibrations when the most accurate measurement results are required. They are typically used when making return loss or VSWR measurements using vector network analysis techniques. These are used in waveguide calibration kits to remove equipment errors during reflection measurements.

The cone load is installed into the center of a waveguide cavity with a short circuit plate directly behind the larger diameter. Typical VSWR values for cone loads are less than 1.02:1 over the waveguide operating frequency band. Thorndike manufactures cone loads ranging is frequency from 1 – 80 GHz. covering waveguide sizes from WR-650 to WR-10.

Thorndike manufactures high power equivalent versions of cone loads however we do not recommend using them at excessive power levels to the limited heat sinking availability of the parts.

Thorndike TAPERED SPEAR Loads

THP-XXXX, DTW-XXXX AND DTHP-XXXX



Thorndike spear loads come in a variety of shapes for various applications. These are both low and high power versions of each of these parts however most applications include some type of medium to high power requirement. They are typically used for semi-precision applications and higher power applications where the heat generated can be removed through the waveguide walls. These loads typically cover full waveguide bandwidths with an estimated VSWR of 1.10:1 or better. Performance at the very low end of waveguide bands may deteriorate slightly for shorter length parts.

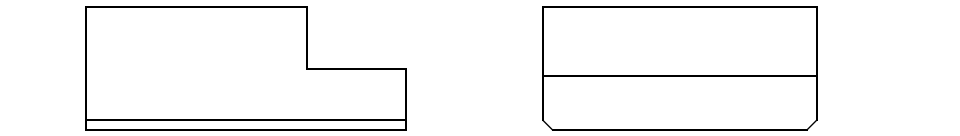
Thorndike manufactures Tapered spear loads ranging is frequency from 1 – 40 GHz. covering waveguide sizes from WR-650 to WR-22.

Typical power levels of Spear loads range from 50 to 1000 watts depending on the waveguide size, and cooling system employed by user.

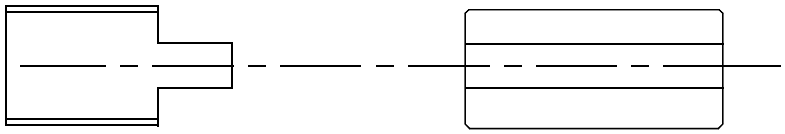
Thorndike TONGUE Loads

TL-XXXX

STEP LOAD



TONGUE LOAD



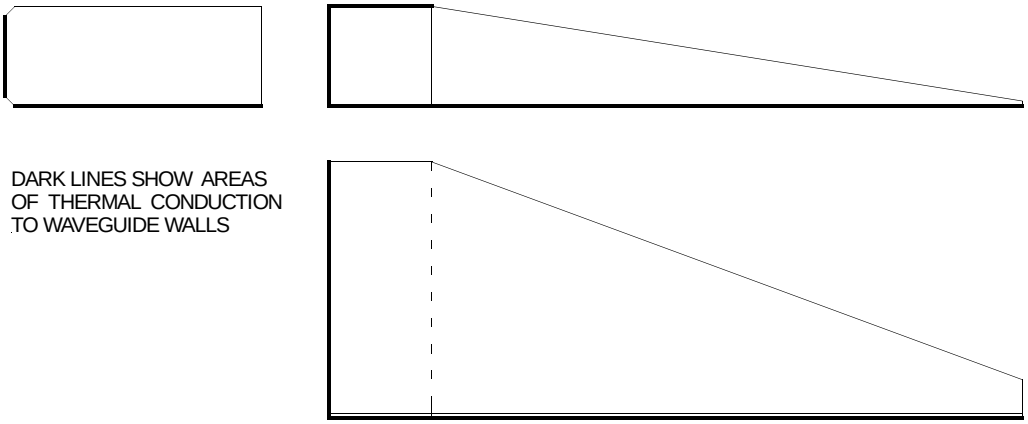
Thorndike Tongue and Step loads come in both low and high power versions. The low power versions use an iron loaded lossy material and the higher power versions are made from silicon carbide. Because of the small size of these parts, it is difficult for these to operate at very high powers unless high operating temperatures within the assembly can be realized. Typical power levels of silicon carbide Step or Tongue loads range from 2 to 100 watts depending on the waveguide size, mounting technique and cooling system employed by user.

They are typically used for low bandwidth applications where good performance is required over narrow frequency bands. Typical performance for a single step or tongue load is 1.10:1 over a 10% waveguide band. Increased performance can be obtained by adding additional steps however this causes the length to increase as well. These parts are used when space is a concern and the system has a defined frequency band.

Thorndike designs and manufactures hundreds of different Step loads ranging is frequency from 1 – 40 GHz., covering waveguide sizes from WR-650 to WR-22.

Thorndike WEDGE Loads

WL-XXXX



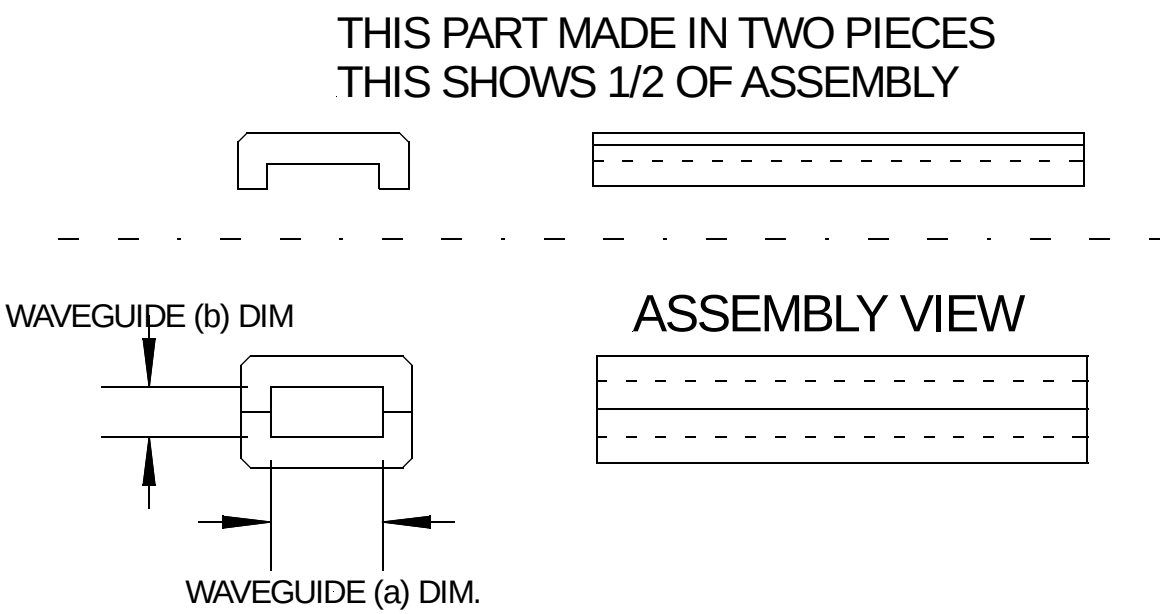
Thorndike Wedge loads come in both low and high power versions. They are typically used for semi-precision applications and higher power applications where the heat generated can be removed through the waveguide walls. These loads typically cover full waveguide bandwidths with an estimated VSWR of 1.10:1 or better. Performance at the very low end of waveguide bands may deteriorate slightly for shorter length wedge loads.

Thorndike manufactures Wedge loads ranging is frequency from 1 – 40 GHz. covering waveguide sizes from WR-650 to WR-22.

Typical power levels of Wedge loads range from 50 to 500 watts depending on the waveguide size, length of wedge and cooling system employed by user.

Thorndike High power Channel Loads

CHL- XXXX



Thorndike High power channel loads are used in applications where the highest power is required. We build these two piece channels in many lengths, thicknesses and dimensions custom to your housing design. These loads are made to remove power and the generated heat through all four waveguide walls. These loads typically cover full waveguide bandwidths with an estimated VSWR of 1.15:1. Usually customer defined external dimensions define operating performance and power ratings.